ABSTRACT OF THE DISCLOSURE

A control unit for a motor-assisted vehicle such as a bicycle is disclosed that effectively provides an assist drive power to a motor-assisted bicycle during a period of initial pedaling or startup on an upward slope or at the time of acceleration. A first detection signal is outputted when a vehicle speed is equal to or less than a predetermined vehicle speed. A second detection signal is outputted when acceleration is equal to or more than a predetermined value on the basis of a change in the amount of the vehicle speed. A road surface inclination is determined from a map on the basis of a ratio between an actual running resistance and a flat road running resistance. A coefficient K is retrieved form the map corresponding to either the first detection signal or the second detection signal to increase the assist power from the map on the basis of the vehicle speed. The coefficient K is inputted into an assist power calculating portion, and the required assist drive power is calculated.